RAID 3 + 3

ABSTRACT OF THE DISCLOSURE

A data storage subsystem that includes three data storage units, three check storage units, and an array controller coupled to the three data and three check storage units can tolerate failure of any three data and check storage units failures can be occur before data stored on the data storage subsystem is lost. Information is stored on the data storage subsystem as a symmetric Maximum Distance Separation code, such as a Winograd code, a Reed Solomon code, an EVENODD code or a derivative of an EVENODD code. The array controller determines the contents of the check storage units so that any three erasures of the data storage units and the check storage units can be corrected by the array controller. The array controller updates a block of data contained in any one of the data storage units and the check storage units using only six IO operations.

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